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Electric Power
Commission

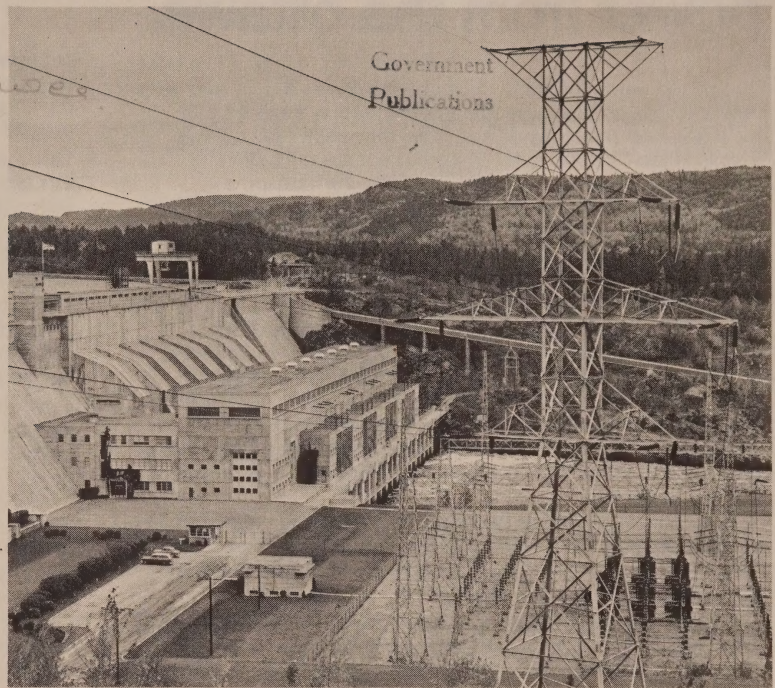
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power from the ottawa

Government
Publications



power from the ottawa

Renowned since the early days of the country's development as the route used by explorers, trappers and fur traders on their way to and from the west, the Ottawa River gained later fame for the great square rafts which were floated down to Quebec City from the vast pine forests along its upper reaches. The broad expanse of the Ottawa forms the boundary between Ontario and Quebec for much of its 700-mile course. Entering the St. Lawrence River at a point near Montreal, the Ottawa drains an area 57,000 square miles in extent.

First of the major hydro-electric projects to harness its might was the Chats Falls development 36 miles northwest of the City of Ottawa. Jointly built and owned by Ontario Hydro and the Ottawa Valley Power Company of Quebec, the 10-unit Chats Falls station came into service in 1931-32. All of its 178,600-kilowatt capacity is fed into the Ontario Hydro system under the arrangement with the Quebec company.

Located at a narrow section of the river between two big lakes, the Chats Falls dam is a low, U-shaped structure more than three miles long. The interprovincial boundary divides the powerhouse equally.

In 1943 Ontario and Quebec allotted the remaining undeveloped Ottawa River sites equally between them so that each could proceed independently in tapping the power

potential. And with the launching of Ontario Hydro's billion dollar expansion program following the Second World War the Ottawa began to assume its present status as one of the great power rivers of the province.

Three major plants were constructed on the Ottawa during this program and these, together with the earlier Chats Falls station, have a combined capacity of 866,000 kilowatts. Only the Niagara and the St. Lawrence Rivers exceed the Ottawa as a source of hydro-electric power in Ontario.

The first and largest of Ontario Hydro's three post war Ottawa River plants, Des Joachims came into service in July, 1950. Its name is derived from two brothers who owned great tracts of land in the district.

Located 38 miles upstream from Pembroke, near NPD, Canada's first nuclear-electric plant, Des Joachims is Hydro's fourth largest hydro-electric station. Its capacity is 360,000 kilowatts. The project involved clearing of 11,000 acres of land and the diversion of 23 miles of railway line and 12 miles of highway flooded by the headpond.

Three dams were required at Des Joachims including the massive main dam which is 180 feet high; a 1,300-foot long auxiliary dam structure; and a 1,600-foot control dam on McConnell Lake - a flood discharge channel running parallel to the main stream of the river.

ChenauX generating station, 60 miles downstream from Des Joachims was the second of the three developments to be placed in service - in November, 1950. Named after the rapids on which it was built, ChenauX is the smallest of the three plants, with a capacity of 122,400 kilowatts.

The headpond at ChenauX forms a lake seven miles long, with an average width of one mile. Four dams with a total length of 4,000 feet were required to close off the river at this site.

On June 10, 1952, then Ontario Prime Minister Leslie M. Frost and the late Robert H. Saunders, Ontario Hydro chairman, participated in opening ceremonies at Otto Holden generating station, the last and northermost of the three post-war plants built by Hydro on the Ottawa River. Named in honour of Dr. Otto Holden, former Hydro chief engineer, this was the 13th major power source added to the Hydro network during the billion dollar expansion program launched in 1945.

Located five miles north of Mattawa on a section of the river formerly known as LaCave rapids, the plant has a capacity of just over 205,200 kilowatts. Flooding of its headpond created an artificial lake 30 miles long and half-a-mile wide extending upstream to Lake Timiskaming. Its construction involved relocation of 37 miles of railway line and three miles of highway.

As with the other Ottawa River plants, Otto Holden spans the inter-provincial boundary between Ontario and Quebec.

facts about otto holden

Cost:	\$60 million
Location:	near Mattawa
Capacity:	205,200 kilowatts from eight units
In-service dates:	four units by April, 1952; eight units by April, 1953
Major facilities:	main dam is 2,500 feet long and has a maximum height of 130 feet. The powerhouse straddles the inter-provincial boundary. On the Quebec side is a 1,240-foot spillway section with 48 sluices which can discharge a maximum of 800,000 gallons of water a second.
Headpond:	covers approximately 8,000 acres and extends 30 miles upstream.

facts about des joachims

Cost:	\$75 million
Location:	38 miles upstream from Pembroke
Capacity:	360,000 kilowatts from eight units
In-service dates:	four units by August, 1950; eight units by February, 1951
Major facilities:	main dam is about 2,400 feet long and has a maximum height of 180 feet. Adjacent to it is a 1,300-foot

Major facilities: auxiliary dam. Controlling flood waters at western end of McConnell Lake, which is north of and parallel to the main stream of the Ottawa, is a 1,600-foot dam with a maximum height of 130 feet and 46 sluices. Powerhouse is at base of main dam. Tailrace channel is 7,000 feet long and was excavated through solid rock.

Headpond: stretches upstream for 57 miles to Mattawa and covers 11,000 acres.

facts about chenaux

Cost: \$31 million

Location: about 10 miles north of Renfrew

Capacity: 122,400 kilowatts from eight units

In-service dates: first unit in November, 1950; remaining units by September, 1951

Major facilities: main dam, incorporating intake facilities and powerhouse, is 1,400 feet long and stretches to Limerick Island. The 1,100-foot Limerick Island dam includes a spillway section. Closing off the river's north channel is the 1,400-foot Portage du Fort dam, which lies entirely in Quebec.

Headpond: covering 4,600 acres, forms a lake seven miles long.

